

**Claims**

1. Spraying head for the humidification of the intake air of a piston engine, said spraying head comprising at least one nozzle (3) for supplying a liquid humidifying the intake air into the air intake duct or into a space leading to the air intake duct of the engine, characterized in that the spraying head (1) is movable between at least two positions, a first position, in which first position the spraying head is retracted, and a second position, in which second position the spraying head is protruding.
2. Spraying head according to claim 1, characterized in that, in a non-active state, the spraying head is in the retracted first position, while in an active state, in the second position, at least one of the nozzles (3) of the spraying head extends to a position inside the air intake duct relative to the level of the edges of the spraying head holder (2) or and/or the interior surface of the air intake duct (5).
3. Spraying head according to claim 1 or 2, characterized in that the holder (2) is provided with at least one guide element (13) and the spraying head with at least one guide element mating surface (14) for keeping the spraying head in a desired orientation.
4. Spraying head according to any one of claims 1 - 3, characterized in that the spraying head (1), preferably its shank part (7), and the holder (2) are arranged to function as a cylinder-piston combination in which the spraying head, preferably its shank part (7), is provided with a piston part (7) and the holder (2) comprises a cylinder chamber (8), the piston part being movably fitted in it.
5. Spraying head according to any one of claims 1 - 4, characterized in that the spraying head arrangement comprises means for moving the spraying head (1) from the protruding position into the retracted position.
6. Spraying head according to any one of claims 1 - 5, characterized in that a spring element (10) is arranged between the spraying

head (1) and the holder (2) for<sup>8</sup> moving the spraying head from the protruding position to the retracted position.

5 7. Spraying head according to any one of claims 1 – 6, characterized in that the spraying head comprises at least one first channel (11) for conveying a pressure medium to at least one nozzle (3).

10 8. Spraying head according to any one of claims 1 – 7, characterized in that the spraying head comprises at least one second channel (21) for conveying a second pressure medium to at least one nozzle.

9. Spraying head according to any one of claims 1 – 8, characterized in that the spraying head (1) comprises at least two nozzles (3).

15 10. Spraying head according to any one of claims 1 – 9, characterized in that the spraying head (1) comprises at least one second channel for conveying a medium to another nozzle.

20 11. Spraying head according to any one of claims 1 – 10, characterized in that the spraying head sprays a liquid mist, especially water mist.

25 12. Spraying head according to any one of claims 1 – 11, characterized in that the spraying head (1) is moved from the first position to the second position by the action of a pressure medium.